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This support document to *The Formative Years*, one of a series dealing with exceptional children in the Primary and Junior divisions, suggests procedures and teaching strategies for children encountering communication problems due to speech or hearing difficulties.

Children With Communication Exceptionalities



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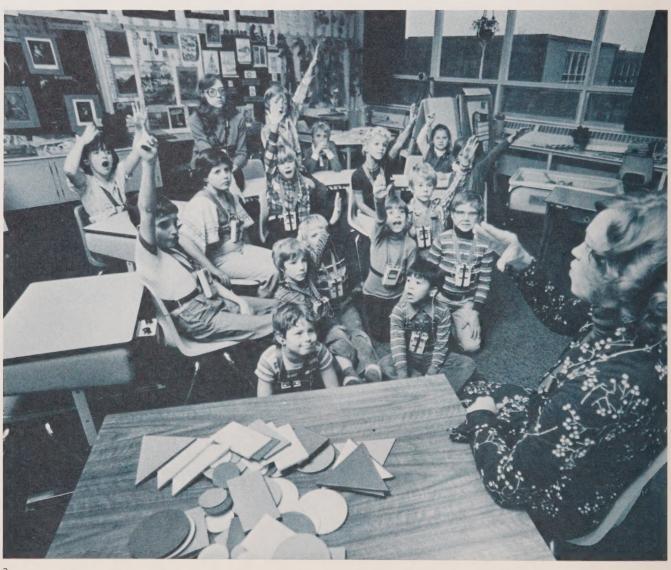
Definitions

In this document, the following definitions are used:

Speech. The functional production of sounds that are appropriate for the formulation of a specific language or dialect. The term *speech* does not imply understanding.

Language. A systematic means of communication; in this document, the combination of vocabulary and syntax into recognizable patterns that are used for communication.

Communication. The exchange of ideas, information, or feelings by any means.



Introduction

The children who form the subject of this document are those who deviate from the normal pattern of language development in some significant way.

Language development is a life-long process. In the home environment, parents and others respond to a child's signals of needs and interests and encourage the child's verbal expression. Differences in home environments may contribute to variations in the language patterns of children who are starting school. Some children may have communication lags as the result of factors such as their personal rate of development, their sibling status, their use of English as a second language or dialect, or as the result of physical defects.

For the purpose of this document, however, a communication exceptionality is defined as a handicap that impedes or prevents the reception, understanding, or production of language. Exceptionality exists when a child's speech or hearing interferes with his/her ability to communicate, socialize, or learn.

In many cases, such a child may have physiological, sensory, or emotional limitations. The teacher's first task, therefore, is to identify children who need special help. The sooner such help is made available, the more likely the child is to improve and the less likely to develop related behavioural problems.

A child whose language patterns deviate only slightly from the norm will benefit from a well-planned language arts program and from a broad curriculum. It is the teacher's responsibility to develop such a program.

A few children with communication exceptionalities may be transferred to a special class or school; others may remain in the regular classroom. In the latter case, the teacher should enlist the assistance of a specialist to plan the child's program.

This document is intended to help the teacher:

- meet the needs of children whose language problems may be alleviated within the classroom;
- arrange the classroom environment to facilitate the language- and hearing-impaired child's learning and adjustment;
- identify children who should be referred to specialists for clinical help.



Communication Disorders

Children exhibit communication disorders in varying degrees. These disorders can be divided into two categories, serious and minor. Those of a serious nature will require the assistance of specially trained personnel, whereas those of a minor nature will usually be handled within the regular classroom.

Pupils with minor communication disorders are those whose language patterns are understandable to a listener: that is, such pupils have a functional use of language. In many cases, their difficulties are due to developmental factors and will be best corrected in time through normal language experiences. In some cases, the classroom teacher will deal with such difficulties with the assistance of consultative staff.

Serious language disorders are those that have significant educational and social implications. Hearing loss, cleft palate, voice disorders, and stuttering are examples of conditions that delay language development or result in partial or complete absence of functional language.

Children who do not follow the normal development sequence when learning a language code are said to be *language disordered*. Those who follow the normal development sequence at a rate not commensurate with their chronological age are said to be *language delayed*. In dealing with language disorders or language delays, teachers should be aware of normal language development as a basis for comparison.

In the normative range of language development, an infant produces vowel sounds first. Consonant sounds are later added to make nonsense syllables and then words. Later still, words are joined to form sentences. More detailed information regarding language development patterns may be found in the books listed at the end of this document.

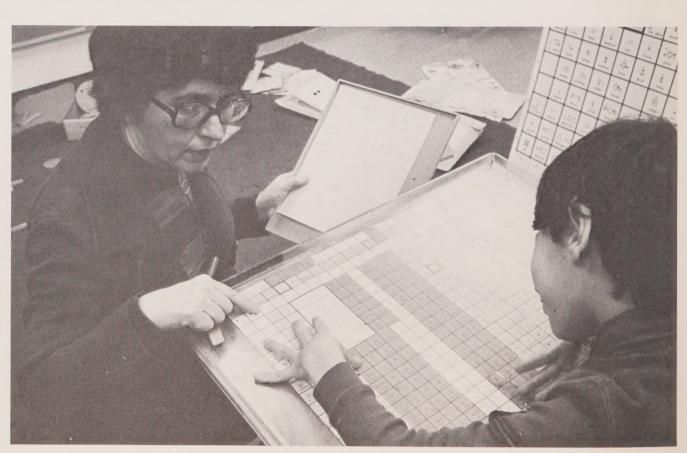
In working with language-disordered or language-delayed children, a teacher may stimulate language development by providing opportunities for:

- activities with clay, paint, sand, and water toys
- imitative play
- role-playing, dramatization, and movement activities
- viewing television programs
- viewing films and filmstrips
- responding to well-told stories
- hearing songs and nursery rhymes

In all learning activities, a teacher should:

- listen carefully to each child's verbalizations and respond to them;
- emphasize speaking rather than articulation or phonetic accuracy;
- devise sensory and motor experiences for each child;
- use rhythmic language patterns;
- provide each child with opportunities to listen for, locate, compare, classify, and discuss a variety of sounds.

For non-verbal and physically handicapped pupils, teachers should use compensatory devices such as Blissymbolics (an international language using a graphic system for the purpose of communicating), spelling boards, language boards, and finger-spelling. Skills in the use of such devices can be acquired with the guidance of special education personnel.



Children With Hearing Impairments

Hearing impairment, of even a moderate degree, can present significant learning problems for a child. If a teacher is at all concerned that a hearing impairment may be contributing to a child's learning difficulties, further assistance and advice should be sought through whatever local facilities are available for assessing hearing acuity.

A hearing-impaired child may need help in learning the language of social interaction. These children miss a great many of the nuances that are automatically understood by other children because of aural reinforcement that begins in infancy.

Supplementary Amplification in the Classroom

Radio frequency (R.F.) hearing aids, designed for severely and profoundly hearing-impaired children, usually consist of a receiver worn by each child and a cordless transmitter/microphone worn by the teacher. This system has several desirable features:

- Mobility on the part of the teacher and pupil is unlimited.
- Each child receives the signal directly from the teacher's microphone, thus making optimum use of residual hearing.
- Each child's hearing aid can function on the R.F. system and through the use of environmental microphones.
- Modern R.F. systems have rechargeable-battery power systems.
- Separate volume controls are provided for each ear.
- The R.F. transmitter worn by teachers has an effective range greater than 15 m outdoors.

If a child comes to a classroom already wearing a hearing aid, the teacher should consult the child's parents, the public health nurse, or other specialists regarding the implications of the physical handicap for the child's educational functioning.

In working with a hearing-impaired pupil, teachers should be aware that a hearing aid does not entirely correct hearing impairments. Most children grasp only key words, filling in meaning through the use of contextual or situational clues. Supplementing a broken aural message with speech-reading is difficult and fatiguing.

Teachers should also keep in mind the following points:

- In operating an R.F. system, teachers should follow the suggestions in the manufacturer's manual of operating instructions. Periodic evaluation of amplification equipment by a professional audiologist or technician is essential to ensure maximum use of each child's hearing capacity.
 Replacement batteries should always be kept available.
- Hearing aids should be worn continuously.
- Environmental noise is more distracting for a child who is hearing-impaired than for normal children. The hearing-impaired child, therefore, should be seated away from windows or doors to reduce interference from outside sounds.
- A hearing-impaired child should be seated near the speaker or speakers; the distance between the child and the speaker should be no greater than 1 m.
- Teachers and peers should develop the habit of turning towards hearing-impaired children when speaking or reading to them.
- Classrooms should be well-lit, with the light falling on the speaker's face.
- Oral work should be limited to ten or fifteen minutes at a time.
- Supplementary information in the form of visual aids pictures, outlines, key words and phrases written on the chalkboard should be provided.
- Simple language should be used for younger children.
- Natural speech, with sentences of varied length, should be used to assist older children to acquire complex language patterns.
- Emphasis should be placed on the initial and final portions of sentences, and on those words or phrases that are most important to meaning.
- Additional directions or instructions should be provided to assure each handicapped child's understanding of the rules of a game.



Emotional Needs of Children Who Are Hearing-Impaired

Total or partial sensory deprivation has serious implications for personality development and for each child's relationships with others. Feelings of inadequacy and frustration may be reflected in a child's behaviour; he/she may require sympathetic help, but not overprotection, in combatting such feelings.

The following suggestions can be used to respond to the stated problems common among pupils who are hearing-impaired:

Behavioural Problem

sullen, obstinate, or negative behaviour

Suggested Strategies

Accompany any request with a positive suggestion, making it difficult for a child to produce a negative response.

Make certain that the child has received the instructions adequately.

 displacement of responsibility for own behaviour to others

Check the child's apparent social-maturity level so as not to expect more than he/she is capable of. Take time to discuss with a child the relationship between cause and effect. (This may require many sessions.)

 denial of ability to understand vocabulary or language forms Through effective questioning, determine the child's level of comprehension without obliging him/her to admit his/her limitations. Work through the child's strengths.

general social ineptitude

Encourage each child to participate in many and varied group activities in the classroom and on the playground. Provide corrective suggestions on a one-to-one basis to avoid embarrassment.

tendency to talk excessively

Tell the child unobtrusively or signal appropriately that he/she is too talkative.



Language Considerations for Pupils Who Are Hearing-Impaired

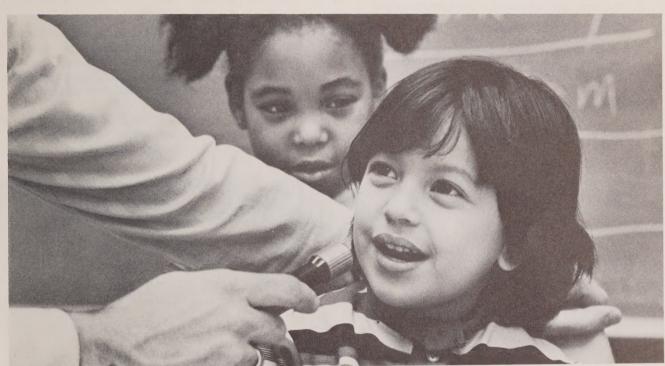
Exposure to good language patterns is important to all children, particularly those with hearing impairments. Even when children with hearing impairments can produce a sound in imitation of a teacher, they may not be able to apply it in other circumstances. They are often far behind other children in their hearing experiences; they have, therefore, much less experience to draw upon in establishing language patterns. In making up for this deficiency, a teacher should:

- use natural, simple language with contextual associations and relationships;
- use visual aids to reinforce sentence structure, verb tenses, and word-endings;
- rephrase, modify, and simplify written directions;
- teach idiomatic expressions and time phrases;
- use written markings, such as "Mary went to the store," to assist in oral phrasing.

Creating a Need to Communicate Verbally

When working with a child, a teacher should create situations where the need to communicate is very strong and non-threatening.

- Teacher-child interactions should take place in an atmosphere of affection and warmth.
- In early stages, all speech approximations should be accepted.
- Children's language should be increased and enriched through real experiences.
- Open-ended questions should be used to stimulate full verbal replies.
- With children who communicate only through grunts or gestures, it is sometimes necessary for teachers to begin with *self-talk* and *parallel talk* as they join a child in working with clay, paint, sand, water toys, a farm, a house corner, or a dress-up area. In *parallel talk*, a teacher verbalizes what seem to be the thoughts of the child, saying the words or phrases at the very instant that the child would normally say them. In *self-talk*, a teacher verbalizes what the child sees or does while an activity is going on.



Teaching a Child to Imitate

In developing children's verbal and non-verbal communication skills, it is important for teachers to encourage all types of imitative behaviour. The following approaches might be used:

- One child performs and others imitate such actions as a bird flying or a rabbit jumping.
- Children imitate the actions of a puppet, for example, jumping, hopping, clapping hands.
- Children imitate animal sounds, common noises, and so on.

Building Language Skills

For all children, the basic language patterns that are used to express ideas arise from experience. With a child who has little or no speech, it will be necessary to teach both basic words and the varied meanings that words and sentences acquire through intonation and context.

Sample Unit

This unit is based on A. J. Nappiers' storybook *Freddie Found a Frog*. It is intended to stimulate children's natural curiosity and their expanding interests, to satisfy their need for explanations about the world around them, to provide experiences for auditory training, and to present in a simple context the language forms and expressions that may be unfamiliar to hearing-impaired children, such as:

- What do you do with . . .?
- What would you do if . . .?
- Don't you mind . . .?
- What on earth . . .?
- Isn't he . . .?

Procedures

- 1. Tell and retell the story until the children make it their own.
- 2. Discuss the concepts and language expressions used in the story.
- 3. Discuss any related activities and interests such as:
- a) taking trips to a pond or park;
- b) setting up an aquarium;
- c) collecting specimens of frog spawn and observing metamorphosis;
- d) collecting pictures of types of amphibians.
- 4. Stimulate the children's pleasure in the lilt of language and lead them in rhythmic clapping, writing, and singing their own verses such as:

Oh! Freddie found a frog,

Oh! Freddie found a frog,

Oh! Freddie found a frog one day,

He didn't know what to do!

This might be sung to the tune of "The Farmer in the Dell" or to one of the children's own creation.

- 5. Expand the children's sensitivity to the sound and pattern of language and develop their vocabulary and awareness of the intonations of language by:
- a) having them dramatize the story, using their own dialogue;
- b) dramatizing the events of the story, using exact expressions from the story;
- c) tape-recording the story. The children should listen to the story and attempt to identify the speakers and the corresponding situational context;
- d) having the children paint, model, read, and write about:
- the people in the story and their individual traits;
- frogs, their habitat, and the environmental conditions essential for their survival;
- the children's own experiences with people, animals, fish, or birds.

Articulation

Almost three-quarters of the speech difficulties identified in school children are of an articulatory, developmental nature. Some of the difficulties arise in connection with temporary physical or emotional conditions such as the loss of primary teeth. Errors in articulation are a part of normal speech development. Some children produce correct sounds inconsistently until the sound has been stabilized in accord with their individual developmental patterns or rates.

Physiological Development of Articulation

There is a fairly definite order to the development of speech sounds. Children, therefore, should practise the sounds for which they have the maturity. Speech authorities consider that the following development represents normal achievement:

- at about $3^{1/2}$ years -p, b, m, h, w;
- at about $4^{1/2}$ years d, t, n, q, k, ng, y;
- at about $5^{1/2}$ years f;
- at about $6^{1/2}$ years v, l, th (voiced);
- at about $7^{1/2}$ years wh, th (voiceless), s, z, sh, ch, zh, j, r, t, l, s blends.
- -s and z develop consistently in words when children are four or five years of age; these sounds often become distorted when the upper anterior teeth are lost. This distortion usually is corrected automatically when anterior dentition is permanent at about eight years of age.

A child who is developing within the normative range both physically and intellectually may be expected to reach maturity of articulation at about eight years of age.



General Teaching Strategies

Privacy may be a necessary part of a program for a child with articulation difficulties. The emotional state of a child is extremely important in the correction of speech difficulties. The following strategies are suggested in dealing with pupils with articulation difficulties:

- Arrange for a few minutes of daily individual instruction.
- Be sure that the child knows which sound is being corrected.
- Work with one sound at a time.
- Begin with the sound that seems easiest to correct (the one produced correctly on occasion or the one imitated most
- Use specific situations for practice within daily curriculum activities.
- Restrict correction of sounds to a bare minimum during the early stages in order to avoid frustration.

Specific Strategies

The following might be used as part of a child's daily experience on a one-to-one basis:

For auditory identification of the correct and incorrect production of speech sounds (phonemes):

Hiding Game. Sound the phoneme correctly when the child approaches a hidden object; make no response when he or she turns from it.

Reading Game. As you read aloud, the pupil responds with a given signal when the word is spoken correctly and with another signal when it is spoken incorrectly.

For production of a phoneme in isolation:

Snakes and Ladders. The pupil "climbs" one step of the ladder each time he or she produces the phoneme correctly.

For production of a phoneme in the initial, medial, or final position of a word:

Lotto. The child matches phonemes printed on small cards with words containing these phonemes that are printed or illustrated on a large master card.

For production of drill words containing phonemes in the three positions (initial, medial, final) in isolation and in sentences:

Concentration. Paired picture cards contain drill phonemes (e.g., cat, mat, bat). The pupil who identifies the location of a sound and reproduces it correctly keeps the paired picture cards.



The following are further techniques for promoting sound production and stabilization:

- direct stimulation
- Ask the pupil to imitate your production of a phoneme.
- phonetic placement
- Ask the pupil to watch, imitate, and describe your movements in producing a phoneme. When the pupil produces the target phoneme, he or she sustains, repeats, and exaggerates it, sometimes using a mirror to observe and correct lip or tongue position and movements.
- multi-sensory stimulation
- The pupil learns how sounds *feel*, for example, by placing the fingers on the side of his or her nose while sounding the letter *m*.
- word activities
- Using objects, pictures, or lists, have the pupil play games such as Word Bingo.
- Using a theme such as "Hallowe'en", the pupil builds a vocabulary of words containing target phonemes for example, the phoneme k as in cat, costume and pumpkin and presents them orally to the class.
- The pupil learns verses containing the target phonemes for presentation to the class.
- conversation activities
- The pupil responds to specific situations, such as "What do you say to a police officer when you are lost?".
- independent activities
- The pupil reads his or her own stories aloud. Check the pupil's sound production.
- The pupil dramatizes a story while telling it.
- The pupil describes a picture in detail or discusses it with another child. Listen to the child to find areas of progress or of weakness.

Voice Disorders

Because of the numerous causes of voice disorders, medical specialists must determine the need for special assistance.

It is important to check the child's hearing first. A child who is hard of hearing may be increasing voice intensity to compensate for inadequate reception.

The school can provide one of the best settings to establish normal voice patterns. The music program, for example, will assist a child to:

- expand his or her vocal range;
- develop breath control;
- develop the ability to sing and chant in tune;
- develop speech articulation;
- develop inner hearing through singing;
- develop an awareness of pitch;
- experiment with patterns of vocalization.



Classification of Speech Disorders

The first step for a teacher is to determine how a certain speech pattern differs from the norm. The following considerations are useful in the evaluation of speech problems:

Voice

- Is pitch too low or too high?
- Is the voice too loud or too soft?
- Is the quality of the voice nasal, hoarse, breathy, or whispered?

Language

- Are sentences long, short, simple, or complex?
- Are sentences grammatically accurate?
- Do the speaker and the listener understand what is being communicated?

Speech problems can be categorized as follows:

- those arising from structural impairments such as a cleft palate (characterized by nasality and difficulty with articulation) or oral and dental malfunctions (affecting articulation);
- those arising from sensory impairments such as poor hearing (affecting articulation, voice, and language) or perception difficulties (affecting articulation and discrimination);
- functional problems including the substitution of sounds (fum for thumb); the omission of sounds (pay for play); the distortion of sounds (slusy for slushy); or the addition of sounds (puhlease for please).

The following teaching suggestions are adaptable to all aspects of the curriculum and can be modified to suit an individual pupil's needs:

- 1. Set a good adult example for speech.
- 2. Check the volume and quality of sound on audio-visual equipment.
- 3. Establish rules for good voice production such as:
- a) Talk quietly (no shouting or screaming).
- b) Avoid talking while inhaling.
- c) Talk when you wish, but not too much.
- d) Clear the throat easily.
- e) Cough only when necessary.
- f) Avoid talking in noisy places.
- g) Talk at an appropriate rate.
- h) Talk at an appropriate pitch level.
- i) Do not use forced whispers.

Stuttering

The term "stuttering" basically refers to excessive lack of fluency in speech, or speech anxiety. There are many theories as to its cause, but most will fit into one of the following categories:

- Stuttering may be a neurological disorder. The belief here is that there is an organic cause for stuttering.
- Stuttering may be an environmental problem. The belief is that the child, once mistakenly labelled a stutterer, begins to live up to the label.
- Stuttering may be a psychopathological or personality problem. The belief is that the stutter is a symptom of emotional disturbances.

How to Help a Stutterer

- Understand the phenomenon of stuttering. Some pupils who normally stutter may sing or speak in chorus, act, or learn a second language without stuttering. This may eventually result in fluent speech.
- Accept a child's speech.
- Take time to listen. Look directly at the child and do not appear embarrassed.
- Create opportunities for each child to talk. A teacher can capitalize on a child's interests, knowledge, social behaviour, and willingness to speak.
- Give verbal recognition and rewards regularly and honestly.
- Do not offer bad advice such as "Slow down," "Think before you speak," or "Say it again."

How to Obtain Assistance for Children With Communication Exceptionalities

The following groups of people can provide information to assist teachers with the development of programs that are suitable for pupils with communication exceptionalities:

- Parents can provide information about the child's social and emotional functioning within the family and community.
- A school nurse can provide information about a child's health.
- Support services personnel, such as Primary and special education consultants and speech and language specialists, can provide specific data, and can assist in developing programs, related to their areas of expertise.
- Medical specialists such as pediatricians, audiologists, speech pathologists, and neurologists can provide details within their areas of training.

Assessment and remedial or maintenance programming are needed for those hearing-impaired children:

- whose adequate functioning is dependent on their ability to speech-read and to benefit from sound amplification;
- with high-frequency hearing loss which often escapes detection;
- whose hearing ability appears inconsistent.

If services are not available in the local community, help can be sought at a regional resource centre for the hearing handicapped.

Resource Materials

Books

Brown, Roger. *A First Language*. Cambridge, Mass.: Harvard University Press, 1973.

Foss, B., ed. *New Perspectives in Child Development*. Harmondsworth, Middlesex: Penguin Books, 1974.

Hayes, John R., ed. *Cognition and the Development of Language*. New York: John Wiley & Sons, 1970.

Ling, D., and Ling, R.H. *Basic Vocabulary and Language Thesaurus for Deaf Children*. Monograph. Montreal: Institute of Otolaryngology, McGill University, 1968.

Nappiers, A.J. *Freddie Found a Frog*. New York: Van Nostrand Reinhold, 1968.

Northcott, W. The Hearing-Impaired Child in a Regular Classroom: Preschool, Elementary and Secondary Years. Washington, D.C.: A.G. Bell Association for the Deaf, 1973.

Films

Both of the following films, illustrating and explaining Blissymbolics, may be obtained on loan from the National Film Board by school board audio-visual departments.

Mr. Symbol Man. National Film Board, 1976. 16 mm, colour, 49 min.

Symbol Boy. National Film Board, 1975. 16 mm, colour, 4 min.

